

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-11 (Cancelled).

12. (Currently amended) ~~The data processing system as claimed in claim 8,~~

A data processing system, comprising:

a plurality of hosts;

a plurality of data storage devices; and

an apparatus coupling the hosts to the data storage devices, the apparatus having host ports connected to the hosts, wherein the data storage devices are configured into logical storage units, the apparatus is programmed with a mapping of the hosts to respective logical storage units, wherein the apparatus includes a switch for routing the data storage access requests from the host ports to ports that provide access to the data storage, wherein one or more of the ports that provide access to the data storage are assigned to each host, a set of storage volumes are made accessible from each of the ports that provide access to the data storage, and the apparatus is programmed so that said each host can access storage at said each of the ports that provide

access to the data storage only if said each of the ports that provide access to the data storage has been assigned to said each host;

wherein the mapping includes a respective mapping for each host of logical unit numbers of storage to data storage volumes that are configured from the data storage devices and are accessible to said each host, and the apparatus is programmed to respond to a request directed to said each of the ports from said each host for a report of the logical unit numbers of storage that are accessible to said each host from said each of the ports that provide access to the data storage by providing a report of the logical unit numbers of storage that are accessible to said each host from said each of the ports that provide access to the data storage.

Claim 13 (Cancelled).

14. (Currently amended) ~~The data processing system as claimed in claim 8;~~

A data processing system, comprising:

a plurality of hosts;

a plurality of data storage devices; and

an apparatus coupling the hosts to the data storage devices, the apparatus having host ports connected to the hosts, wherein the data storage devices are configured into logical storage units, the apparatus is programmed with a mapping of the hosts to respective logical storage units, wherein the apparatus includes a switch for routing the data storage access requests from the host ports to ports that provide access to the data storage, wherein one or more of the ports that

provide access to the data storage are assigned to each host, a set of storage volumes are made accessible from each of the ports that provide access to the data storage, and the apparatus is programmed so that said each host can access storage at said each of the ports that provide access to the data storage only if said each of the ports that provide access to the data storage has been assigned to said each host;

wherein the apparatus is programmed with a respective private/shared flag for each port that provides access to the data storage for indicating whether or not said each port that provides access to the data storage provides access to data storage that is private to a respective one of the hosts.

Claims 15-26 (Cancelled).

27. (Currently amended) ~~The apparatus as claimed in claim 20,~~

An apparatus for coupling a plurality of hosts to a plurality of data processing devices, the apparatus comprising a switch having host ports for connection to the hosts and ports for providing access to the data storage devices, and a controller programmed with a mapping of the hosts to respective logical storage units configured from the data storage devices, wherein the controller is programmed for controlling the switch to respond to data storage access requests received at the host ports from the hosts for access to the logical storage units by decoding a host identifier and a logical storage unit specification from each data access request received at each host port,

wherein one or more of the ports that provide access to the data storage are assigned to each host, a set of storage volumes are made accessible from each of the ports that provide access to the data storage, and the apparatus is programmed so that said each host can access storage at said each of the ports that provide access to the data storage only if said each of the ports that provide access to the data storage has been assigned to said each host,

wherein the mapping includes a respective mapping for each host of logical unit numbers of storage to data storage volumes that are configured from the data storage devices and are accessible to said each host, and the apparatus is programmed to respond to a request directed to said each of the ports from said each host for a report of the logical unit numbers of storage that are accessible to said each host from said each of the ports that provide access to the data storage by providing a report of the logical unit numbers of storage that are accessible to said each host from said each of the ports that provide access to the data storage.

Claim 28 (Cancelled).

29. (Currently amended) ~~The apparatus as claimed in claim 20,~~

An apparatus for coupling a plurality of hosts to a plurality of data processing devices, the apparatus comprising a switch having host ports for connection to the hosts and ports for providing access to the data storage devices, and a controller programmed with a mapping of the hosts to respective logical storage units configured from the data storage devices, wherein the controller is programmed for controlling the switch to respond to data storage access requests

received at the host ports from the hosts for access to the logical storage units by decoding a host identifier and a logical storage unit specification from each data access request received at each host port,

wherein one or more of the ports that provide access to the data storage are assigned to each host, a set of storage volumes are made accessible from each of the ports that provide access to the data storage, and the apparatus is programmed so that said each host can access storage at said each of the ports that provide access to the data storage only if said each of the ports that provide access to the data storage has been assigned to said each host,

wherein the apparatus is programmed with a respective private/shared flag for each port that provides access to the data storage for indicating whether or not said each port that provides access to the data storage provides access to data storage that is private to a respective one of the hosts.

Claims 30-43 (Cancelled).

44. (Currently amended) ~~The method as claimed in claim 40,~~

In a data processing system including multiple hosts and multiple data storage devices, a method of operation of an apparatus for coupling the hosts to the data storage devices, the apparatus having host ports connected to the hosts, the data storage devices being configured into logical storage units, wherein the method includes:

programming the apparatus with a mapping of the hosts to the logical storage units; and

the apparatus routing the data storage access requests from the host ports to ports that provide access to the data storage; and

which includes assigning to each host one or more of the ports that provide access to the data storage, and mapping a set of storage volumes to each port that provides access to the data storage, so that said each host can access storage at said each port that provides access to the data storage only if said each port that provides access to the data storage has been assigned to said each host;

wherein the mapping includes a respective mapping for each host of logical unit numbers of storage to data storage volumes that are configured from the data storage devices and are accessible to said each host, and which includes the apparatus responding to a request from said each host for a report of the logical unit numbers of storage that are accessible to said each host from said each of the ports that provide access to the data storage by providing a report of the logical unit numbers of storage that are accessible to said each host from said each of the ports that provide access to the data storage.

Claim 45 (Cancelled).

46. (Currently amended) ~~The method as claimed in claim 40,~~

In a data processing system including multiple hosts and multiple data storage devices, a method of operation of an apparatus for coupling the hosts to the data storage devices, the

apparatus having host ports connected to the hosts, the data storage devices being configured into logical storage units, wherein the method includes:

programming the apparatus with a mapping of the hosts to the logical storage units; and
the apparatus routing the data storage access requests from the host ports to ports that
provide access to the data storage;

wherein the method further includes assigning to each host one or more of the ports that
provide access to the data storage, and mapping a set of storage volumes to each port that
provides access to the data storage, so that said each host can access storage at said each port that
provides access to the data storage only if said each port that provides access to the data storage
has been assigned to said each host, and

~~which includes~~ programming the apparatus with a respective private/shared flag for each of the ports that provide access to the data storage, the respective private/shared flag indicating whether or not said each of the ports that provides access to the data storage provides data storage that is private to a respective one of the hosts.

Claim 47 (Cancelled).

48. (New) The data processing system as claimed in claim 12, wherein the request directed to said each of the ports from said each host for a report of the logical unit numbers of storage that are accessible to said each host from said each of the ports that provide access to the data storage is a SCSI "Report LUNs" command.

49. (New) The apparatus as claimed in claim 27, wherein the request directed to said each of the ports from said each host for a report of the logical unit numbers of storage that are accessible to said each host from said each of the ports that provide access to the data storage is a SCSI "Report LUNs" command.

50. (New) The method as claimed in claim 44, wherein the request directed to said each of the ports from said each host for a report of the logical unit numbers of storage that are accessible to said each host from said each of the ports that provide access to the data storage is a SCSI "Report LUNs" command.

51. (New) The method as claimed in claim 44, wherein the request directed to said each of the ports from said each host for a report of the logical unit numbers of storage that are accessible to said each host from said each of the ports that provide access to the data storage is sent from said each host at boot time.

52. (New) The method as claimed in claim 44, wherein the request directed to said each of the ports from said each host for a report of the logical unit numbers of storage that are accessible to said each host from said each of the ports that provide access to the data storage is a SCSI "Report LUNs" command sent from said each host at boot time.